THE FARM INDEX

U.S. Department of Agriculture April 1975

The Farmer & His Farm

Retail meat prices trended lower this winter, but don't get spoiled, Ms. or Mr. consumer. Seasonal reductions in beef and pork supplies predicted for the rest of this spring will probably push prices up again. Numbers of cattle on feed are off sharply, and hogmen keep cutting back on farrowings. Explanation: tough times for livestock growers . . . unstable market conditions . . . steep feed prices . . . severe cost price squeeze in general.

If cattle slaughter drops back as expected, fed cattle prices could average in the low $40's a hundredweight this spring, slaughter hog prices would top $45 in early summer, and slaughter lamb prices could touch $50 in the spring before turning down in the summer.

The soybean bin is getting back to normal. Carryover stocks on Sept. 1, 1976 are now forecast between 270 and 300 million bushels, quite a step from the estimate for this coming September of 135 million. (Small though it is, the September 1975 carryover will still provide a comfortable cushion in case of a late 1975 crop or an unexpected surge in soybean demand.)

Even if planting and growing conditions this year are less than favorable, ERS figures 1975 production would outdo last year's 1,233 million bushels by some 200 million. That would lift total supplies to around 1.6 billion bushels, 10 to 20 percent over last season and more than enough to fill demand.

Calls for soybean oil and meal are lagging. Blame is pinned on the economic slump, poor livestock and poultry margins, and slow buying from abroad.

Price-wise, soybean farmers aren't happy about it all. Between October 1974 and March 1975, prices they got sank nearly $3 a bushel from over $8. Prices in spring and summer will depend on the final size of the 1975 crop, any change in soybean/meal demand, and veers in the economy. There will be no loan program for 1975 soybeans from the Commodity Credit Corporation.

Something To Beef About

Tallying up the value of all cattle on U.S. farms last January 1, you arrive at $21 billion . . . equal to the combined value of this country's farm exports in fiscal 1974.

If this sounds like a record, your memory is failing. Recall that in 1974 the cattle inventory chalked up a worth of $41 billion at a time when the herd was 4 million smaller than now. To the cattleman, this tune is as familiar as "Home on the Range," and it goes by the title of cattle cycles.

Every 10 or 12 years the growth in beef supply finally outruns consumer demand, explains one ERS cattle expert. The upshot is a break in cattle prices. He adds this footnote, however: "Although the cyclical transition in the mid-1970's is not without precedent, it is producing the greatest financial hardship for cattlemen in 20 years."

Since late 1973, cattle feeders have reported losses of $50 to $200 per head, even though prices of fed cattle last year averaged the second highest on record. And the men selling those cattle to the feeders watched their prices nosedive 50 percent between 1973 and 1975.

The break in cattle prices is worse than usual this time for a combination of reasons: consumer boycotts, Government price controls, drought conditions, record high feed prices, energy problems, and the ailing economy. But, the industry will recover from the sickbed, the ERS expert believes.

"Just because ups and downs in beef production and cattle prices have existed for a long time provides little consolation for cattlemen now. It does, though, provide a basis for optimism about the future.

"A healthy and profitable cattle industry has emerged from low points in the cycle after large inventories have been worked down for a year or 2. This time will be no exception."

King cotton is in trouble. Mill use this year could suffer its biggest decline since the late 1930's. Weaker demand has dragged cotton prices down, and with the steady uptrend in production costs, cotton producers view the situation with alarm. Spring plantings, by March indications, contracted some 29 percent from last year. The hope is that the tax rebate checks—along with some recovery in the economy later this year—will spur consumer buying of cotton and textile goods. If so, the textile industry could regain the road to recovery in the second half of 1975.

This is the year of the orange. Nationwide, production will set a new record of nearly 10.3 million tons. Florida expects a record harvest, the California crop is the biggest since 1946/47, and Arizona's output will top last year's by roughly a third. Larger U.S. supplies spell lower prices for growers, especially during the spring as the Valencia harvest—up 12 percent from last season—gets underway.

Lemon production will score a new high too. Current forecasts say the crop will surpass last year's small harvest by over 1½ times. Growers' returns are down sharply from last year and are likely to remain low for the rest of the season.

Grapefruit production, however, is off. Supplies might shrink as much as 7 percent in 1974/75. California's output is more than a third larger than last season but the important Florida crop is down 6 percent. Growers can thus expect better prices this year as supplies dwindle and overseas shipments pick up.

On the supply-demand scale, tobacco is on the beam. By the March 1 report of planting intentions, production should about match expected usage—in the range of 2.1-2.3 billion pounds. The overall supply outlook reads little gain from 1974-75, even accounting for a smaller carryover.

Prospects for demand: Up for cigarettes, due to bigger population (smokers last year puffed 600 billion) . . .

probably down for cigars, smoking tobacco, and snuff, but up for chewing types.

Eggs have been a good buy in recent months and will stay that way for a while longer. Come summer, however, egg prices will make their usual seasonal rebound. They might even be more costly than in the summer of 1974, based on the production outlook. Egg output is down from last year—around 5 percent—reflecting the decline in the Nation's layer flock.

Same goes for broiler prices in months ahead. Expect new price strength as broilers ride the wave of price increases building for competing meats, namely, beef and pork. The situation could change by year's end, though. Broiler production shows signs of expansion, and fatter supplies would likely soften prices.

The rice pot is boiling as never before. ERS expects total use to hit a record-shattering 108 million hundredweight this marketing year. The real shot will come from exports, up about 40 percent to 71 million hundredweight from the old record set 3 years ago. Commercial shipments and those under the Public Law 480 program will share in the increase.

Prices to rice growers, meantime, are tumbling. As of March, prices were running 38 percent under a year ago. Producers might get even less as the year wears on, judging by planting intentions for the current crop, which could equal or exceed last year's record.

Come 1985, U.S. farmers will need about the same amount of fuel they're using today. Bear in mind we're talking about needs of all farmers. Some will be tanking up more than others. Livestock producers, for instance, will require 5 percent more fuel than today, according to ERS projections.

Farmers can cut corners, however. Last year, those buying gas in bulk saved an average of 5 cents a gallon over the men who patronized gas stations, ERS figures.

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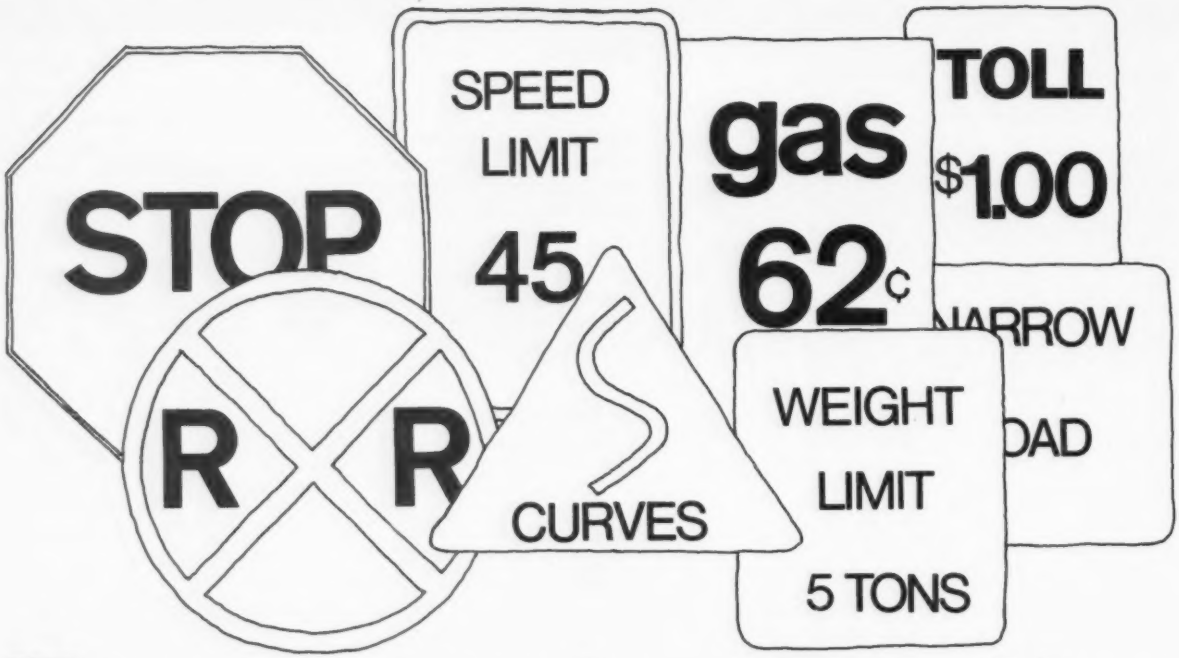


Transportation Tie-Ups

No matter how many rail cars, trucks, and barges are available to ship farm produce this year, farmers and shippers will not soon forget the transportation nightmares of 1972-74.

Equipment shortages and shipping delays were nothing new, but the severity of our recent export-induced marketing snarls caught most producers and distributors off guard. And while bulging elevators were eventually unloaded and grains shipped to their destinations, the transportation crisis raised some weighty issues in rural areas.

Many farmers and rural businesses now question whether they will receive reliable and reasonably priced transportation services in coming years. They see inadequate or costly transportation as a potentially continuing constraint on production and marketing.

Nagging doubts. There's also the lingering fear that the overshadowing role of nonagricultural traffic will prevent our general purpose transportation system from meeting agriculture's shipping requirements.

And equally disturbing—many feel that unless something's done about current conditions, large-scale marketing bottlenecks could easily occur again.

What's behind this shaken confidence and mounting concern about our rural transportation network? At the core of many rural marketing problems is the troubled state of the railroad industry. For despite shifts from rail to truck shipments of many agricultural goods, railroads are still the mainstay of our grain transportation system. Farmers also depend on the trains for delivery of a large share of their fertilizer and other necessary farm inputs.

Troubled railroads. However, many railroads have been beset with dwindling revenues, financial losses, and bankruptcies, especially in the Midwest and Northeast. Also, their nearly completely regulated status—in contrast to other bulk agricultural carriers—has made it hard for them to adjust to dips and peaks in transportation demand.

As a result, shippers have frequently complained of deteriorating service, rising rates, and periodic shortages of needed freight cars.

Another source of concern has been the stepped-up pace at which railroads have been applying for abandonment of branch lines. Many rail lines do not carry enough traffic to be economically viable, say railroad officials, and such lines are operated at the expense of the whole system.

Although retaining all of these unprofitable segments could require large subsidies and mean poorer service for many other areas, abandonment has nonetheless become a hotly debated, emotionally charged issue, with railroads on one side and

shippers and communities on the other.

Higher shipping costs. Shippers and other businesses depending on rail lines that are abandoned often incur some losses as they turn to more costly truck shipments. Even if they are willing to pay the higher charges, nearby roads and bridges must be able to handle increased traffic and heavier loads.

Shippers near inland waterways are luckier—barges can transport bulk commodities that don't require rapid movement at relatively low cost. But while barges are important movers of grains, minerals, fertilizers, and other dry cargo, their geographic limitations rule them out as an answer to many agricultural shipment problems.

Rail transportation is important in grain production areas without ready access to barges. To ensure continued service, many grain companies have purchased or leased their own rail cars. Some elevators on branch lines have loaned railroads money to upgrade track and keep the cars rolling. A few have even purchased branch lines about to be abandoned and are operating their own railroads.

Communities' fears. From a community's viewpoint, rail abandonment can mean declining property values, loss of jobs, and dimmer prospects for economic development. In fact, some communities fear they will cease to function as trade centers and thus face the possibility of economic extinction.

In the past few years, the abandonment question has become more critical. Between the 1920's and 1973, the Interstate Commerce Commission (ICC) has granted abandonment requests totaling nearly 66,000 miles. However, applications filed from 1971-73 alone accounted for more than 11,000 miles. Early this year, 365 abandonment cases involving about 7,700 miles were pending before the ICC. More of the mileage was in the Corn Belt than in any other region, with the Northeast a close second.

Past effects. What's the record in past abandonment cases? Have the worst fears of farmers and rural businesses been realized? There are no definitive answers, but a Department of Transportation study of 10 contested cases found that while shipping costs rose and some marginal enterprises were forced out of business, most firms survived, adjusted, and prospered.

Several other analyses of agricultural areas have suggested that abandonment, consolidation of elevators, and use of multiple-car shipments could yield lower grain marketing costs for long hauls—and greater returns for farmers and shippers.

In fact, a Canadian study concluded that abandonment of light-traffic rail lines and their small-scale grain handling facilities was "imperative if producer costs are not to rise significantly."

Abandonment and agriculture. So far, say ERS economists, track losses apparently haven't affected important segments serving our major agricultural regions. Serious consequences may have occurred in some local instances, but in many cases, farmers and shippers had already turned to other transportation modes while the trains were still running. Uncertainties about future abandonments may be of more concern than past impacts.

The complexities of the abandonment question are enormous, and what happens in the next few years will leave a lasting mark on the rural transportation and marketing system.

While abandonments can result in more efficient rail service, economists caution that mass abandonment of all marginal lines would undoubtedly cause economic hardship in some areas. It would also severely restrict the resumption of rail transportation should future needs arise.

Greater need for trucks. However, the potential for additional loss of track appears to be great, and with it will come an increased need for trucking services in many agricultural areas.

Agricultural trucking already plays a major role in farm marketing. Interstate highway improvements in recent years and the truckers' ability to provide rapid, reliable, and flexible delivery service have led to the nearly complete shift of perishables and livestock from rails to trucks.

Trucks have the added advantage of being exempt from economic regulation when hauling unmanufactured agricultural goods across State lines. This means their operating areas and rates are not restricted, and they can respond competitively to regional and seasonal transportation demands.

Long-term truck shortages aren't likely either. Though many agricultural truckers operate only one or a few vehicles, trucks are generally available for purchase as the need arises, and they are relatively inexpensive compared with the capital requirements of railroads and other modes.

Questions about roads. Despite their flexibility, the prospect of stepped-up truck movements poses a problem for some agricultural areas. Many rural roads aren't capable of carrying frequent heavy loads—a particular concern to some shippers in major grain-producing regions.

And even if local rail lines aren't abandoned, recent trends toward centralization of grain elevators and feed, fertilizer, machinery, and chemical distributors in larger rural communities require longer truck hauls and add stress to country roads.

Rural roads have improved somewhat in the last decade, but more than 60 percent of all arterial and collector roads were rated deficient by the States in a 1970 study.

Well over half of the collector mileage in the U.S. was found to be unpaved or to have a low surface pavement unsuited to continuing heavy truck traffic. In addition, many rural roads have seasonal load restrictions, narrow roadway or lane widths, low speed limits, or weight and size restrictions on bridges. All of these factors could potentially limit the regular flow of goods to and from rural areas or substantially

boost shipping and road maintenance costs.

A critical network. Researchers particularly focused on collector roads since they directly serve agricultural areas and often link local shipping and receiving points to larger trade centers. Rail abandonments and consolidation of elevators would likely increase heavy truck shipments on these roads.

Also, while the percentage of deficient collectors is about the same as for arterials, collector mileage is about two and a half times as great.

The collector system apparently is in the worst shape in Appalachia, but roads in the Corn Belt are also pretty bad in regional comparisons. Although agricultural traffic is generally heaviest in the Corn Belt, one-fourth of the region's collector roads are gravel or unpaved, and another fourth have only low pavement. Arterial roads appear to be poorest in the Delta States and Southeast.

Problems of width. Narrow lanes or roadway widths could also inhibit traffic flows in many areas. Only slightly more than two-fifths of the Nation's minor arterials and less than one-fifth of the collectors have lanes 12 feet wide or wider.

However, by themselves, deficiencies in road surfaces or width need not mean that a roadway is intolerable. Traffic density is an important criterion as well.

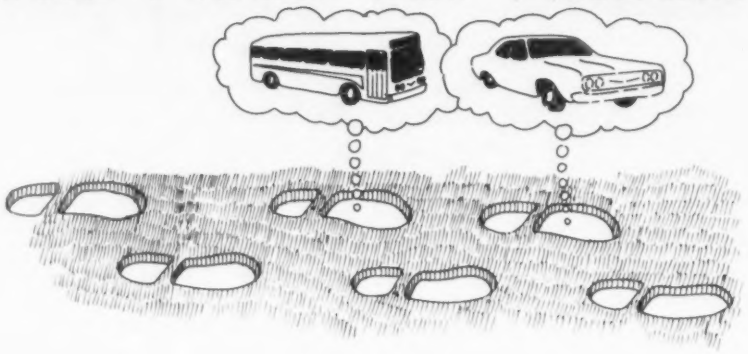
For example, in the Northern Plains, where paved collector roads are almost the exception, traffic levels are relatively low and only about one-third of the collectors were rated intolerably narrow or rough.

In contrast, the mostly paved collector roads in the more crowded Northeast and Appalachian regions were frequently rated intolerably narrow.

Improvement costs. Altogether, the States estimated the costs of alleviating most rural road deficiencies at $108 billion in 1970.

[Based on *Transportation in Rural America: An Analysis of the Current Crisis in Rural Transportation*, prepared by ERS for the Senate Committee on Agriculture and Forestry.]

The Need For Wheels



You're fed up with city life, the hassle, the crowds, the noise. That small rural town you went through on your last vacation seems mighty appealing. Maybe you'll leave the neon lights behind and head for the country. But unless you own a car or can afford one, you'd better reconsider.

Why? A car's just about the only way to get around in rural America. Public transportation in or between towns doesn't exist or else it's rapidly dying out. Recently the situation has worsened because of energy shortages and inflation.

The rural elderly, handicapped, and poor have always worried about transportation. And they've had the most reason to be concerned. Of those earning less than $5,000 a year, about a third don't own a car. And whatever their income, two-fifths of all elderly rural residents heading households don't have cars, or are restricted from driving by health problems.

Mounting concern. Now people outside rural areas, including Federal agencies and Congress, are becoming increasingly disturbed about rural transportation problems.

Though about 12 percent of city people take public transportation to work, less than 1 percent do so in rural areas. Though rural people take rather short trips—most are 15 miles or less one way—some kind of motor vehicle is essential. They also travel more and farther per trip than urban drivers. And because more and more rural people are commuting to nonfarm jobs, their need for cars will keep increasing.

High cost of driving. Keeping their cars running takes a hefty chunk of rural residents' income. As costs continue to escalate, the penny pinch worsens, especially among the rural poor. People earning $5,000 annually —and who travel 30 miles roundtrip to work—spend a whopping 25 percent of their earnings on transportation alone. Some rural people are carpooling but others aren't so lucky.

What about the people who don't have wheels? They've got to rely on public transportation—air, rail, bus, and taxi. Intercity travel is barely possible, and locally, the situation is even worse. So rural people without cars rely on neighbors, infrequent buses, and taxis—when they can afford them and when taxis are available. Not many are.

What's happened to rural public transportation? Why is it nonexistent in the countryside and deserting small cities and towns?

Low passenger volumes. For one thing, low-cost transit operations with reasonable frequency in schedule need a high volume of passengers between any origin and destination. Yet, even in high-density urban areas, transit systems have been operating in the red. In rural areas, origins are more dispersed than in urban sectors, though a fair number of rural people might have the same destinations. And since many rural

people do own cars, it cuts down the small volume of demand that otherwise would exist for public transit.

Bus companies have faced declines in passengers and revenues in the past decade, but the smaller operations have suffered the most. Many rural towns and smaller cities haven't maintained their systems because of lack of funds and low priority for public transportation.

Buses apparently have trouble attracting passengers, probably because their scheduling, routing, and equipment size haven't adapted to fit demand. Competition from private motor vehicles forces many of these bus companies both in and between rural towns to cut service or go out of business.

A vicious cycle. So a vicious cycle develops—reduced service cuts demand and revenues, and the transit system goes further downhill. Since many of the rural poor without cars must travel between cities for services, especially medical care, the cutbacks hit them the hardest.

What are the alternatives to declining public transportation in rural areas? Several recommendations have been posted.

Intercity improvements could include signaling devices and bus shelters installed on interstate and other expressway ramps. Intercity bus routes could be subsidized until they pay for themselves.

Providing local transportation for rural people may require public funding rather than relying on free enterprise. The problem is weighing the costs and benefits of public subsidies, and it would need to be solved on a case-by-case basis.

Tailoring services to needs. What type of transportation system would fit rural requirements? Door-to-door service is practically imperative. So is ridership drawn from all groups, not just the poor or elderly. Service should be reliable yet minimal to keep costs down. Work trips aren't a good bet, initially at least, since most jobholders carpool or drive alone. People could subscribe monthly or make reservations for bus service. Volunteers and people paid part-time could serve as drivers and dispatchers. Public utility commission regulations that unduly hinder starting up new operations would have to be changed.

Using existing rural transportation systems more efficiently is another possibility. Since most rural towns belong to school districts, rural residents could ride the school buses. These aren't constantly in use, and a computerized routing system could make them available to rural people needing transportation.

Mail trucks and taxis. In England, they've used another alternative—the postal vehicle. Rural people there have been riding along with the mail. They put up their mailbox flags or call the post office to get a lift. Essentially a feeder system for regular transit services, the postal cars drop riders off at central points where they can board buses. This idea is being tested in West Virginia.

As another alternative, individuals in rural areas could be encouraged to set up taxi or jitney-type services. They'd need some incentive—like changes in laws that now prohibit such services, technical and legal help to get started, lower license fees, and cooperative purchase of insurance. The drivers could operate a call-in service. In town a cruise-type service might be used.

Cars could be provided to people living in the farthest corners of a trading area. They'd transport other people and take care of their own travel needs at the same time.

Publicizing services. A basic requirement of a useful system is a way for people to know about the service and how to receive it. Carpool locators would help improve use of existing transportation. And a schedule of types of transit including frequency and methods to request them could be posted in central trade centers.

Some services, like health care, could go to the people needing them. USDA's food stamp program already is administered from mobile units in some rural areas. If systems like these are extended, they could considerably ease some of the more pressing transportation problems in rural areas.

[Based on *Prelude to Legislation to Solve the Growing Crisis in Rural Transportation*, Feb. 10, 1975, prepared for the Senate Committee on Agriculture and Forestry by ERS and the National Area Development Institute, Lexington, Ky.]

Tung Nut Crop Fizzles, Substitutes Fill Gap

As required by law, the 1974 price support for tung nuts was set at $80.60 per ton. Only one catch—virtually no tung nuts were harvested last year in the U.S. or the year before that.

Production of tung nuts, whose oil goes to make paints and varnishes, appears to be on the way out in this country, because of damage due to unfavorable weather. In its heyday in the late 1950's, production reached 45 million pounds a year, with acreage stretching in a 50- to 100-mile belt from Florida to Louisiana. But since Hurricane Camille in 1969 and subsequent heavy frosts, the crop has dwindled to nothing.

Hundreds of acres of tung trees remain unharvested this year, and only two farmers are in the market—one in Mississippi and one in Florida. Although the stalwarts feel they can cope with the weather problem by using hardier varieties, the real hangup is lack of a mill to crush the tung nuts.

Decreasing demand isn't helping matters either. Our use of tung oil has slumped over the past 25 years due to erratic supply and prices. In 1950, usage totaled 72 million pounds. This year's estimate comes to only 20 million. With zero production and depleted stocks, use may decline even further if users continue to shift to substitute materials. The introduction of latex or water-based paints, which use little if any drying oils, drastically curtailed the demand for tung oil.

[Based on special material from Stanley A. Gazelle, Commodity Economics Division.]

The Farmer & His Farm

The rich and versatile land and water resources of the U.S. support an almost infinite variety of agricultural enterprises.

Each year on the 1.3 million acres agriculture uses, 4.3 million persons apply their labor and skills to produce nearly 200 crops, hundreds of millions of livestock, and billions of poultry.

All of this results from the individual decisions of nearly 3 million farmers who decide what crops to produce, how many acres to devote to each, and how much livestock to raise.

In the driver's seat. Most of these decisions and the effort that turns them into reality are supplied by farm operators and their wives and kids. Only about a fourth of the agricultural labor force are paid workers.

That makes farming the only major industry in the U.S. in which family members make up the largest share of the labor force. Even so, it's also an occupation where some of the people involved earn more money elsewhere than in farming.

Our farms come in a variety of sizes. They range from the small family farms with a few cows and chickens, a pig or two, a garden, and a few acres to raise food to sell, to very large farms of a thousand acres or more owned by individuals, cooperatives, or corporations and operated by managers and hired labor.

Who is a farmer? A farmer may run his own small farm or a 320-acre spread where he raises grain and livestock. He may be a cattleman who owns just a small acreage but rents a thousands acres of range country. He may operate a big farm for someone else, or be a sharecropper with a few acres.

Farms also differ in what they produce and where they produce it. Though some crops and livestock are found in all parts of the country, the kinds and amount vary by region. Soil conditions, climate, and even how far it is to the nearest or best market, influence decisions on what and how much to grow.

On the great bulk of farms, the operator also is the owner. The 1969 Agriculture Census showed that 86 percent of the farms were under sole proprietorship and accounted for 72 percent of the land in farms. Often a father and son own and operate a farm together.

According to the census, 13 percent of the farms were operated under a partnership (averaging 2.5 partners). These farms accounted for 18 percent of the land in farms. A large share of these partnership farms are

owned by members of a family.

Assembly line operations. We have other kinds of farms, too—such as the large, commercial farms that have an almost factory-type system of operation. Most are in California, Arizona, southern Texas, and Florida. Corporate farm arrangements, however, account for only 1 percent of the farms and 14 percent of the output. About 92 of these corporations have 10 or fewer shareholders, and probably represent family operations that have gone the corporation route to ease the transfer of holdings between generations.

One of the most striking trends over the past 2 decades has been the rapid drop in the number of farms. The 2.8 million at the beginning of 1975 was only half the number of 1950. The drop resulted primarily from the machinery and other technology that permit a farmworker to handle a much larger acreage than he could before. In recent years over half of the farms sold have been purchased by other farmers to enlarge their operations.

Big investment. Today's farmer may have several hundred thousand dollars invested in his farm. For example, for some typical one-man operations it may take $200,000 for a 360-acre Louisiana rice-soybean farm; $321,000 for a 1,950-acre Kansas wheat-sorghum farm; $769,000 for an 800-acre Indiana corn-soybean farm; and up to $611,000 for a 200-acre California vegetable farm. The largest share of the farmer's investment is in land.

Today, a farmer making his living only from farming must sell products worth at least $20,000 to provide his family with a minimum level of living and some return on his investment.

Part-timers. It's obvious that not all farms produce enough to earn that much. But many farmers do not even try or want to do so. Some use their farms only for part-time operations or retirement residences. On the other hand, some factory-type farms bring in hundreds of thousands of dollars a year.

In the early 1970's about 35 percent of our farms had sales of less than $2,500 a year. These account for only about 2 percent of our food. Some are retirement and part-time farms. Others are subsistence farms where family members are underemployed. On the average, people living on such farms receive more than 10 times as much income from off-farm work as from farming.

About one-fourth of the farms sell between $2,500 and $10,000 worth of products and account for about 8 percent of all sales. Few of these will provide a satisfactory level of living unless supplemented by other income. Farmers in this bracket receive twice as much nonfarm income as farm income. Income to all farm people from off-farm sources averages $7,100 a year—more than the $6,100 from farming.

Minimal living. Farms with $10,000 to $20,000 product sales account for 10 percent of sales and 13 percent of the farms. Farming is generally intended to be the main occupation of the operators, but income from these farms does not provide much more than minimum living standards and little or no return on investment. Nonfarm income averages four-fifths of the operators' farm income. This is considerably less than the off-farm share for smaller farm operators.

The rest of the farms, about 700,000, are gradually growing in number. These have gross sales of $20,000 or more, and account for 80 percent of all farm product sales. Among these farms are more than 70,000 with sales of at least $100,000 a year. They represent only 2 percent of the farms but have 38 percent of the sales—including about 70 percent of our vegetables, half of the fruits and nuts, and 55 percent of all poultry and poultry products.

To sum up, the average size of our farms is 385 acres; farmers sell livestock and crops valued at over $23,000 per farm; and their average net farm income is $6,100 a year.

Fewer enterprises. Farmers are becoming more specialized. A major change is the trend toward raising fewer kinds of crops or livestock, buying more of the seeds and feed, and using more mechanical equipment such as tractors and milking machines. Today, the average farm has less than three major enterprises, compared with over five before World War II.

Although there still are some advantages to diversified farming, there are important reasons for specializing. It takes a high degree of skill and knowledge to compete successfully in producing just one farm product. A farmer who does well uses a knowledge of genetics, land and water conservation, and business management. Even the specialized farmer performs many different jobs with complex tools and machines. He combines science and machine power with the ancient art of tilling the soil.

High cost of farming. A farmer must also consider costs when deciding what to produce. Costs that must be met before he receives a return on his investment vary greatly by crops. For example, the cost per acre is $23 for wheat, $32 for soybeans, $65 for corn, and up to $150 for cotton.

His costs will average out to 75 cents out of every dollar of sales. The share varies, ranging from about 60 cents per dollar of sales on small farms to 85 cents on farms with sales of more than $100,000 a year. As the farm gets bigger, the farmer must purchase more fertilizers, pesticides, gas and oil, and other nonfarm goods. And the larger the farm, the more hired workers he has to pay.

Customers of industry. Farmers are large purchasers of tractors, trucks, automobiles, and other equipment. They buy about 1 of every 8 trucks that are sold. In a recent year they spent over $1.5 billion for tractors, $1.4 billion for automobiles, and $3.0 billion for machinery like plows, planters, and harvesting machines. And of course, as in other industries, these machines will wear out or become obsolete and have to be replaced.

Most crops have benefited from the increased specialization and the

FARMING IN PERSPECTIVE

The U.S. would look like this if the sizes of States were proportional to their value of farm production.

greater spending by farmers for the latest technologies. For example, since 1950 corn yields have more than doubled—from 38 to over 90 bushels per acre. Cotton yields also have nearly doubled, going from 269 to 520 pounds. Wheat yields have risen from 16.5 to 32 bushels an acre and soybeans from around 22 to 28 bushels.

Risky business. Increased outlays are common to most industries, in keeping up with the efficiency-raising technologies. But farming parts company with most other industries when it comes to the income flow to finance those improvements. Farm income can fluctuate widely from year to year, and even within a season. One of the reasons is that crop production is not a continuous process. Usually it covers a period of only a few months in which crops can be badly damaged by weather, insects, or disease. Unlike most manufacturing industries, a farmer has almost no control over how much his farm will produce once the crop is planted . . . and almost no other industry is so beholden to such an unpredictable and widely variable factor—the weather.

Erratic price swings. Income variation also results from the wide swings in prices common for agricultural products. In 1970 farmers received $22.70 per 100 pounds for hogs. This dropped back to $17.50 in 1971 and then rose to $39.30 in 1974. Similar ups and downs occur in the prices of other commodities. For example, feeder steers began 1974 at over $50 per 100 pounds but wound up the year at less than $30.

While his prices may fluctuate widely, prices of the things a farmer has to buy tend to go up steadily. This increases his already great risks. Some farmers, in an effort to reduce their risk, enter into informal agreements with other agricultural-related businesses like feed dealers and processors. Such an agreement may let the related business share in management decisions. These arrangements are called coordinated farming.

Various forms of farm and business arrangements have existed for a long time in commercial fruit and tree nut production. Contract farming now accounts for about two-thirds of the vegetables produced for canning and freezing.

Hedge for poultrymen. Most of today's broiler production is a joint undertaking between farmers and processors. Men employed by the processor do much of the poultry farm management. Production is concentrated in operations that make the fullest use of labor-saving equipment. In this way, poultry raisers reduce their risks and get a guaranteed income.

The sugarbeet industry is another example of contract farming. Sugarbeets are heavy, bulky, and perishable. They are grown under contracts which guarantee a market for farmers and supplies for the processor.

Negotiated contracts tie the price of the sugarbeets to that of sugar. These specify the acreage to be planted, seeds and growing methods to be used, the dates the beets are to be delivered to the processor, marketing practices to be used, and even when the farmer will be paid.

Best record. Larger investments in technology and more specialization have increased the efficiency greatly. In fact, farmers have made the best record in this respect of all our industries.

Since 1950, the output per man-hour in agriculture has increased at a rate of nearly 6 percent a year compared with 2.5 percent for all other industries.

The rise in our agricultural productivity means fewer workers are needed to produce our food. In our country, there are 53 people for every 1 employed on farms. This compares with 16 and 23 in developed countries like France and West Germany. The Soviet Union has 5. In less developed countries like India and Pakistan there are less than 4 persons for every farmworker.

For city folks. What does all this mean to those of us who live in cities? Agricultural efficiency has helped raise our standard of living by providing abundant food at low cost in relation to our take-home pay, leaving us more income for other things —houses, cars, college educations.

A second contribution of the continuing rise in agricultural productivity is the release of workers to other sectors of the economy.

The outflow of manpower from our farms has had social and economic costs, however. Many of the released workers are poorly equipped in terms of skills, education, and personal resources for nonfarm occupations. Some find the city has little to offer except unemployment benefits or low-paying, insecure jobs. As a result, many have added to the already existing problems of unemployment and poverty.

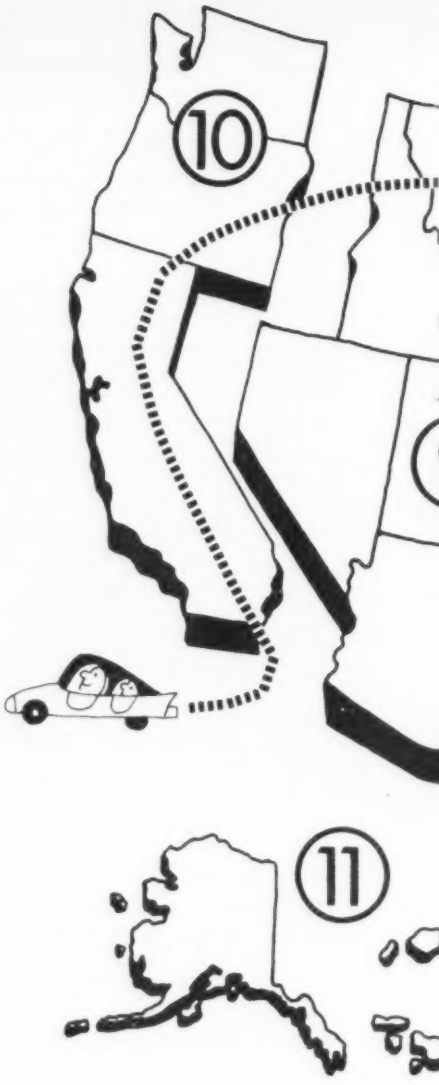
Farmers as spenders. A third benefit has been the creation of many jobs in the nonfarm sector of the economy. Farmers spend more than $60 billion a year for goods and services to produce crops and livestock. Added to this, about $15 billion goes for the same things that city people buy—food, clothing, and other consumer products and services. Nearly a fifth of the farmers live in town.

A fourth benefit of increased efficiency has been the farm family itself. The per capita income gap between the farm and nonfarm family has tended to close. In the 1950's the income per capita of the farm population was less than 55 percent of nonfarm, in the 1960's about 65 percent, and in the 1970's 75 percent.

Challenges ahead. What about the future? Farmers will continue to face the challenges of changing technologies. They will face the national challenge of improving our environment and overcoming shortages of energy. Challenges in the past have made today's farmers and their farms the envy of the world. Just as the Revolutionary War soldier-farmer would not recognize the tools and technology used by today's farmers, we can expect as great a change in the next 200 years. We too will not recognize the farm of the future.

[Based on special material by Donald D. Durost, National Economic Analysis Division.]

On Tour With Agriculture



Welcome aboard! Your tour of agriculture USA starts in the Northeast and takes you through our 10 farm production regions plus Alaska and Hawaii. Meals will be served en route, courtesy of your host, the American farmer, who every year produces 3 tons of food for the average family. For all 213 million of us, that adds up to 160 million tons —enough to fill a freight train stretching 8 times the distance from New York to San Francisco. So, fasten your seat belt, loosen your belt buckle, and let's get going.

1 Northeast. The soil in these parts tends to be rocky and hard to farm, but this region still yields 6 percent of the Nation's farm output. If you hail from one of the big cities around here, chances are you drink Northeast milk (the area produces over a fifth of all dairy products), and dine on Northeast broilers, vegetables, and fruits. Farms number about 186,000 and average 169 acres.

2 Appalachia. Those leafy plants are tobacco, a top money-earner for Appalachian farmers who turn out four-fifths of the U.S. tobacco crop. Peanuts, cattle, and dairy products also rate high in the income ledger. The 481,000 farms in this region are relatively small —127 acres on the average—but they account for 8 percent of our farm production.

3 Southeast. Farms start to get larger again as we head south. Farmers here are big on cotton, peanuts, broilers, cattle, and fruits and vegetables. Down Florida way, citrus and winter vegetables dominate the landscape. Farms number a bit under a quarter of a million, averaging 231 acres in size, and providing 7 percent of our output.

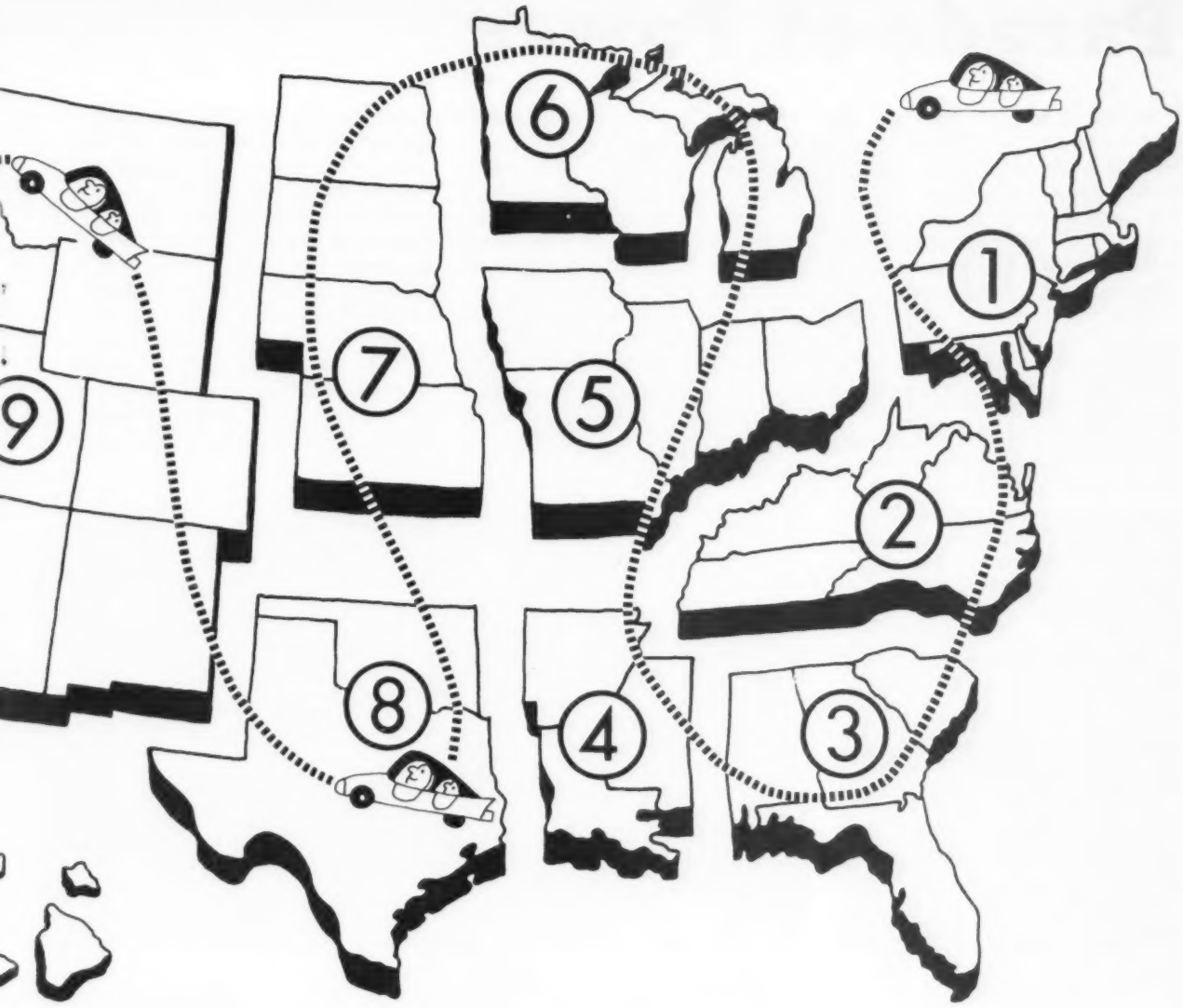
4 Delta. King cotton is the Delta farmer's favorite cash crop, but you see a lot of rice, soybeans, and livestock as well. This region has 202,000 farms producing 6 percent of U.S. farm production and averaging 231 acres.

5 Corn Belt. Turning north, we enter corn country, where fields are flat and fertile and nearly 60 percent of the land is in crops. About a fourth of all our farm products come from here. Besides corn—the No. 1 livestock feed—many farmers raise soybeans, wheat, beef, and hogs. The farm count is 624,000; units average 210 acres.

6 Lake States. Time for a milk break. Endowed with abundant hay, forage, and pasture, this region ranks first in milk production and gives us more than a fourth of all dairy products. It has 302,000 farms, which are about as big as in the Corn Belt.

7 & 8 Northern and Southern Plains. If bread is on your mind now, it figures. These two regions are America's breadbasket, growing over 60 percent of our wheat. Or maybe a juicy steak? There's no shortage in the Southern Plains, particularly in our No. 1 beef cattle State of Texas (it's also first in cotton). You probably won't be reaching for your umbrella on this leg of the trip . . . rainfall is sparse, causing farmers to put much land into fallow each year to assure enough moisture to produce a crop. Large farms are the rule in the Plains, from the Dakotas as far south as Kansas. They average 790 acres in Oklahoma and 605 in Texas. The Plains States together furnish nearly a fourth of our farm output.

9 Mountain States. Heading west, the level terrain yields to mountains and valleys. Vast expanses of this region are ideally suited to raising cattle and



sheep. Irrigation lets farmers raise an array of crops in the valleys, like sugarbeets, potatoes, and fruits and vegetables. Out here you need long legs to roam your property—the average farm has more than 2,150 acres, the most of any region. Farms and ranches add up to 121,000 and account for 7 percent of total production.

10 Pacific Region. Up north you find mainly wheat and fruits. The southern part is the home of a large family of fruits and vegetables, grown in irrigated valleys and shipped throughout the country. Cattle are prominent also. Farms number 136,000, average about 530 acres, and claim 11 percent of national output.

11 Alaska and Hawaii. Jetting to the Union's newest States, you might be surprised to see so many vegetables growing in Alaska—long summer days make this possible. Major foods produced by Alaska's 300 farms, however, are dairy and poultry products. On to Hawaii now for rest, recuperation, and a tall glass of fresh pineapple juice from one of Hawaii's 4,700 farms. A land of contrasts, Hawaii's few large farms raise pineapples, sugarcane, and cattle, though most farms average around 25 acres. The mild climate also favors bananas, coffee, macadamia nuts, and papayas.

Parade of Power

The tractor wins the cup in the parade of power on America's farms. Hitched to an eight-bottom plow, the modern tractor can cultivate and sow 100 acres in 24 hours. In George Washington's time a horse team plowed but 4 acres a day—and 1 of them went to raise feed for the horses.

When the new Nation was born, however, ox power often provided the only means to till the fields (photo 1), and manpower (2), to bring in the crops.

In the 1830's they rolled out the first McCormick reaper and improved it year by year (3). Revolutionary though it was, the reaper only goaded the farmer to set his sights higher when it came to mechanization. He needed something mightier than a horse to run the threshers and other belt-driven hardware.

Enter the steam engine (4) circa 1850. A giant step forward, but the first steam threshers still had to be hauled from place to place by animals.

So, inventors went to work and developed steam tractors (5), some of which grew to be behemoths as manufacturers quested for improved traction on their models. One of the more bizarre creations (6) featured wooden covered wheels 15 feet wide by 9 feet in diameter and weighed in at 41 tons.

It took over six people to run these giants, not counting the waterboy and the farmer's wife who cooked banquet-size meals for the ravenous crews.

Reducing crew numbers, however, had to wait till the late 1800's and the internal combustion engine. Applying the principle to farm machinery, many equipment makers were building smaller gasoline tractors by the turn of the century. Henry Ford (7) made his experimental 1907 model from leftover parts of a Ford car.

The first general purpose tractor—for plowing, cultivating, and other chores—came along in 1924, and the first diesel-powered tractor in 1931. Also in the thirties, pneumatic tires

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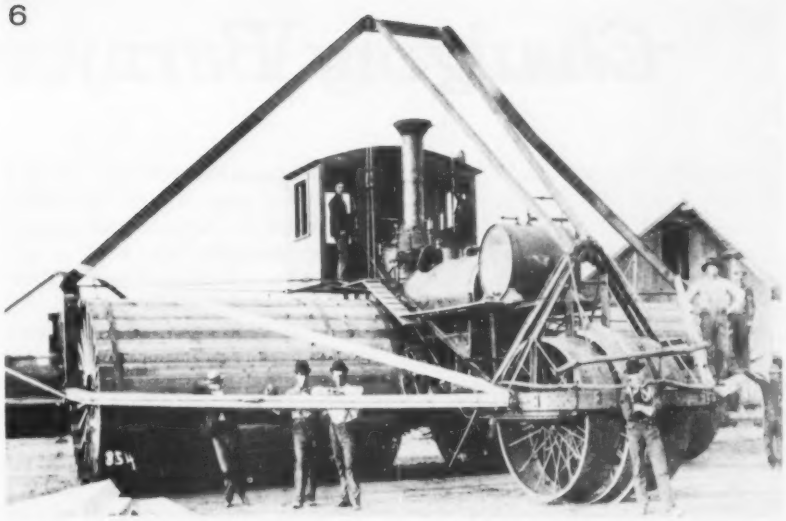
began replacing steel wheels (8), and tractors carried motor lifts to raise and lower implements.

Advances slowed in the forties when tractor factories turned to producing materials for the war effort. But with the war over, the parade of farm power marched forward. Even more sophisticated machines made their debut . . . with more horsepower, engineering options and comforts for the driver . . . all designed to perform an even wider range of tasks for the progressive American farmer (9,10,11,12).

6



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Changing Barnyard Scene

Rhode Island Red, a 1930's broiler, ate 5 pounds of feed to gain 1 pound. Today's crossbred bird takes a little over 2 pounds.

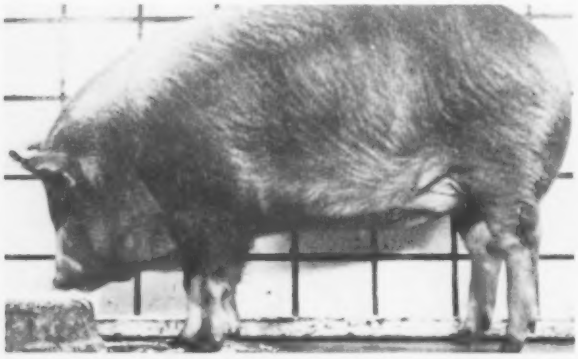
That cantankerous little brown cow who barely gave enough milk, then kicked over the bucket, is only a fond memory to most folks now. In her place may well be a string of those docile, hulking black and whites.

They're different from what your forefathers had to deal with, not only in looks but also in performance. A cow giving over 4,000 pounds of milk a year was exceptional back in the 1900's. Now the U.S. average output is over 10,200 pounds a year.

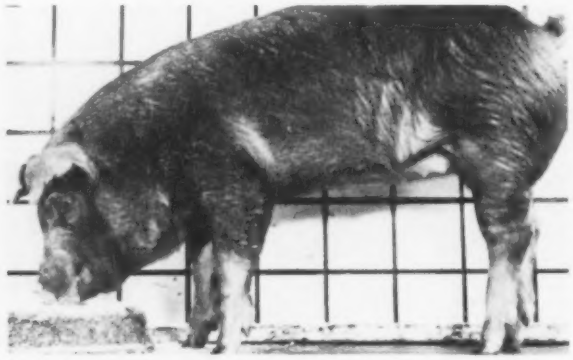
The chickens are different, too. In the 1930's it took 5 pounds of feed to coax a pound of gain on a broiler chicken, most likely a cockerel of an egg-laying breed such as Rhode Island Red. Today's highly crossbred bird puts on a pound of meat for only a bit over 2 pounds of feed.

Sounds around the farm are even changed. The braying of Jenny is long gone, replaced by a descendant of the unique Poppin' Johnny tractor sound. Even your cow pony's clopping may be on the way out, replaced by the hum of a trail bike.

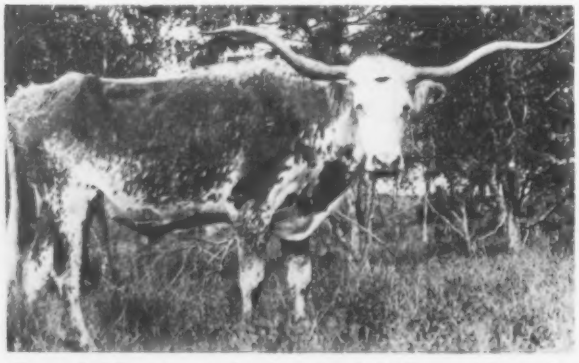
Moreover, the place looks different. Remember those neat shocks of milo that stood taller than your father? Today, their descendants are waist-high heads of hybrid sorghum, as uniform in rows as soldiers, awaiting the combine to yield 4 times the grain per acre that their forebears did.



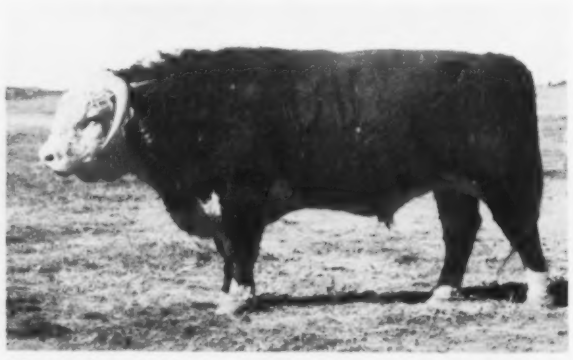
A high-fat Duroc hog is typical of the hogs produced in the past. Emphasis was on fat as lard was in demand.



Today's Duroc produces more pork, less fat. It needs less feed per pound of gain than earlier breeds.



Grass-fed Longhorns, hardy animals built to withstand heat and drought, were beef producers of the 1800's.



Modern breeds like Herefords are feedlot fattened on corn and other grains. Beef is juicy and tender.

More Product ... Less Labor

Thanks to advanced technologies and labor-saving equipment, today's farmers are working less and doing more. In 1950 there were 2½ times as many farmers as there are today. Yet, in 1974, agricultural output was twice what it was 20 years ago.

In recent times, farmers have produced not only enough to feed the growing U.S. population, but to export an equivalent of 90 million acres of cropland as well.

Although there are half as many operating farms now as there were in 1950, the amount of farmland has stayed about the same. Over 55 percent of recent farmland sold was bought by farmers to enlarge their own operations. Farmers increased the size of their farms to make better use of the costly new machinery and to reduce the cost per unit of production. In 1950 the average farm was 213 acres. Today it's 385.

Today's farmer is more efficient than his 1950's cousin, increasing crop production by over 60 percent per acre. Improved varieties of crops and livestock and better uses of chemicals, fertilizers, and pesticides have all helped. But the main reason for his improved production record has been the shift to mechanization. Since 1950, manual labor has decreased by 40 percent, whereas the use of mechanical power and machinery has increased by 30 percent.

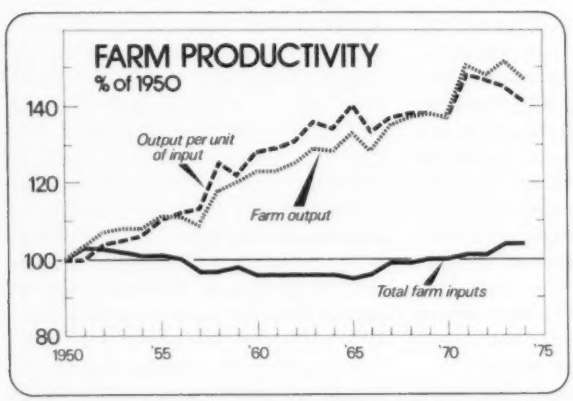
Larger tractors, nearly twice as powerful as those used 2 decades ago, as well as other labor-saving equipment, have boosted the output per hour of work by 275 percent. For example, the man-hours required to produce 100 bushels of corn declined from 40 in 1950 to 6 in 1974; wheat declined from 28 to 9. Farm output per unit of input has shot up 44 percent.

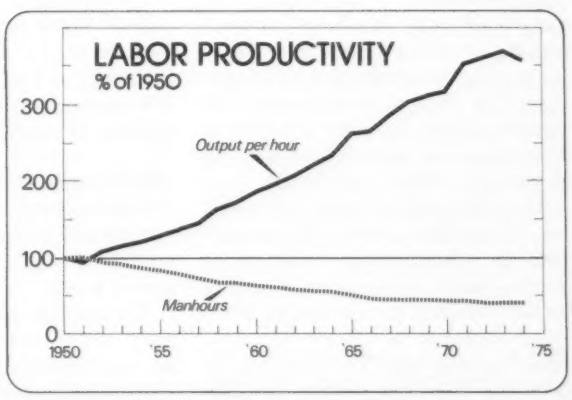
Along with greater productivity, farmers of the 1970's have larger expenditures. They purchase 70 percent more feed, seed, and livestock, and 3 times as much chemicals, fertilizers, and pesticides as in 1950. As a share of all materials used by farmers, purchased inputs now account for over 60 percent, compared with about 40 percent in 1950.

Adopting all the modern technological advances available to him hasn't come cheaply for the present-day farmer. He has 7 times more real estate debt and 5 times more non-real estate debt than 2 decades ago. However, in spite of increased spending of capital funds, today's farmer remains in a relatively sound financial position with a debt-to-asset ratio of about 18 percent.

VITAL STATISTICS

	Unit	1950	1960	1970	1972 - 74
U.S. population	Million	159	181	205	210
U.S. farm population	Million	23	16	10	9
Farm numbers	Thousand	5,648	3,956	2,949	2,840
Farm output	1967=100	74	91	101	110
Total input	1967=100	101	98	101	104
Cropland used for crops	1967=100	111	104	97	103
Hours of farm work	1967=100	208	135	90	85
Farm output per unit of input	1967=100	73	93	100	105
Crop production per acre	1967=100	69	89	104	111
Farm output per hour of labor	1969=100	34	65	111	127





Weather Clouds Soviet Outlook

If meteorology were an exact science, the outlook for Soviet agriculture would look a lot less hazy. As it is, production goals for 1975 are clouded by weather prospects, and the weather report will have to be better than usual to meet the ambitious targets for Soviet farm output.

Although they have cut their original 5-Year-Plan (1971–75) projections for agricultural output by a fourth, Soviet leaders are still calling for an average increase during 1971–75 of upwards of 16 percent over 1966–70 production. This goal will require an 11-percent surge in 1975 over last year's output figures.

Grain output uncertain. Weather will be most crucial for grains. Output is targeted for 215 million metric tons, but chances are 1 in 3 that it will be at least 15 million off the mark—on the up or down side—depending on temperature and rainfall. So far, prospects look relatively good for winter grain crops, but it's too early to tell about the more important spring crops.

Outlooks for the other major crops vary widely, but odds are that many may fall short of Soviet plans.

For sunflowerseeds—the U.S.S.R.'s major oilseed crop—the Soviets are shooting for 7.4 million tons this year—a 9-percent leap over 1974. However, their hopes could be shot down unless weather cooperates.

Sugarbeet goal shaky. The sugarbeet target has been upped by about 1½ million tons, but even the original goal seems optimistic. The weather will either have to be extremely favorable or area expanded considerably to reach the new 94-million-ton mark. This has been hit only once before—in 1968—and recent outputs have generally fallen far short.

Forage crop production will probably be a lot less than anticipated. Although 1975 plans for individual forages are sketchy, the general outlook is pessimistic.

Soviet targets for potatoes and vegetables seem out of reach but not impossible. Although the goals are well above last year's poor performance, they are not far from 1973's record crops. Still, vegetable production will need to exceed the 1973 record by 6 percent.

A bright spot in an otherwise disappointing crop picture is cotton. Production in 1974 topped the original 1975 goal by over a million tons (seed basis).

Lower livestock targets. Short of miracles, livestock production will not reach original 5-Year-Plan goals, except for eggs. So, the Soviets have lowered their sights to levels more in line with current livestock herds and feed supplies.

Consumption goals, too, have been cut back. Although Soviet diets have become meatier since the beginning of the current 5-Year-Plan, they will not increase as much in meat content as Soviet officials had hoped. Planned per capita consumption is now 123 pounds, up only 2 pounds from 1974, but up 18 pounds from 1970.

Consumption targets for milk and products have also been lowered. Per capita consumption in milk equivalent is now set at 705 pounds, compared with 688 in 1974, and 677 in 1970. However, prospects are only fair for the 1975 production goal, so Soviet consumers may be drinking

even less milk and eating less butter than planned.

Eggs, however, will be relatively plentiful. Last year's production of 55 billion was already 5 percent above this year's goal, and production continues to climb. According to Soviet forecasts, the average consumer will eat 207 eggs this year—2 more than in 1974—and the target probably will be exceeded.

Agricultural strides. Even though the goals of the original 5-Year-Plan will probably not be met this year, the Soviet Government has made significant strides in agricultural development. More inputs and favorable policy decisions have been mainly responsible.

Fueled by swelling capital investments, farm inputs such as fertilizer and machinery have increased, but have not measured up to expectations. Deliveries of grain combines have been the greatest disappointment—falling 16 percent short of plans for 1974. Tractor deliveries, up 8 percent last year, were only slightly behind schedule. Fertilizer, though on the upswing, missed the 1974 goal by about 700,000 tons (1 percent), but still should reach overall 5-Year-Plan targets for total availabilities.

The vital farm input—land—is constantly being sought through reclamation efforts. Last year, about 2.5 million acres of newly irrigated land came into agricultural production, while another 2 million swampy acres were drained. Of course, these additions were offset somewhat by the land going out of production.

Policy developments. Key policy developments that will affect the future of Soviet agriculture include:

- More emphasis on vertical integration to achieve closer coordination in the food and fiber system, particularly the livestock industry.
- A 15-year program for agricultural development in the low-yielding Non-Black Soil Zone.
- A thrust to expand government grain storage capacity by almost a third during 1976–80. Crop losses have occurred in recent years due to lack of storage facilities.

Although specific goals of the next Soviet 5-Year Plan (1976–80) have not been announced, a continued push for agricultural development seems certain. And, if the weather is willing, the Soviet Union could still start the next 5 years on schedule—albeit a revised one.

[Based on *The Agricultural Situation in the Soviet Union: Review of 1974 and Outlook for 1975*, AER–101, by Fletcher Pope, Jr., Angel O. Byrne, and David M. Schoonover, Foreign Demand and Competition Division.]

Feed Needs Rise as U.S.S.R. Consumers Eat More Meat

Russians are sinking their teeth into a Western World habit—meat eating. With more money to spend for food, they are favoring meat over grains and potatoes.

The upshot: more grain is being channeled into livestock production. So much so that the U.S.S.R.'s feed needs are likely to outrun production, meaning imports would have to fill the gap. U.S. exporters could have a share of this new business.

The trend in meat use has not gone unnoticed by Soviet officials. A number of policy actions have been taken to swell grain supplies and to reduce requirements through more efficient livestock production.

To increase grain and feed supply, Soviet leaders are promoting agricultural development in the Non-Black Soil Zone, expansion of grain areas, increased fertilizer deliveries to agriculture, an irrigation project, and research on higher protein feeds. For more efficient livestock output, Russia is moving to expand specialized livestock enterprises (including interfarm associations), develop a mixed-feed industry, and improve breeding herds.

Currently, consumer prices of livestock products are heavily subsidized by the state. To avoid retail price increases, however, Soviet policymakers have favored feed imports. But price increases cannot entirely be ruled out and could help reduce the feed gap.

If the Soviet Union continues to whet its appetite for meat and if the feed gap widens, the influx of feed grains from the U.S. is predicted to remain strong, despite the recent Soviet rejection of the 1972 Trade Agreement.

However, any trade projections must be viewed with a wary eye, for actual trade levels will pivot on the following:

- The U.S.S.R.'s financial position in the world market.
- Grain production and domestic needs in the U.S. and in other grain-exporting nations.
- Soviet grain production, feed needs, and trade policies.

Whether the U.S.S.R. will buy its grain from the U.S. or other exporters will depend on world prices and supplies as well as Soviet policies. In our favor, the U.S. has traditionally been able to offer corn at much more reasonable prices than what Canada or Australia charge for their wheat. Also, the U.S. has more feed grains available for export than other suppliers.

However, the whole question of the U.S.S.R.'s feed deficit, and thus trade, hinges precariously on the weather—which could make over a 50-million-ton difference in Soviet harvests. Good weather could result in surplus Soviet grain output in 1975, sharply reducing import needs in succeeding years. Bad weather, on the other hand, could throw the U.S.S.R. on the world market to bid for large quantities of grain, or else force Soviet leaders to lower their goals for expansion of their livestock industry.

[Based on "Trade Projections and the Soviet Feed-Livestock Economy," a paper presented by David M. Schoonover, Foreign Development and Competition Division, at the East-West Relations Discussion Group Meeting, Jan. 22, 1975, Wash., D.C.]

BACK TO THE COUNTRY

Bright city lights no longer draw people from the country like they used to. In fact, it's been the other way around so far this decade, reversing a population trend that many people felt was inevitable.

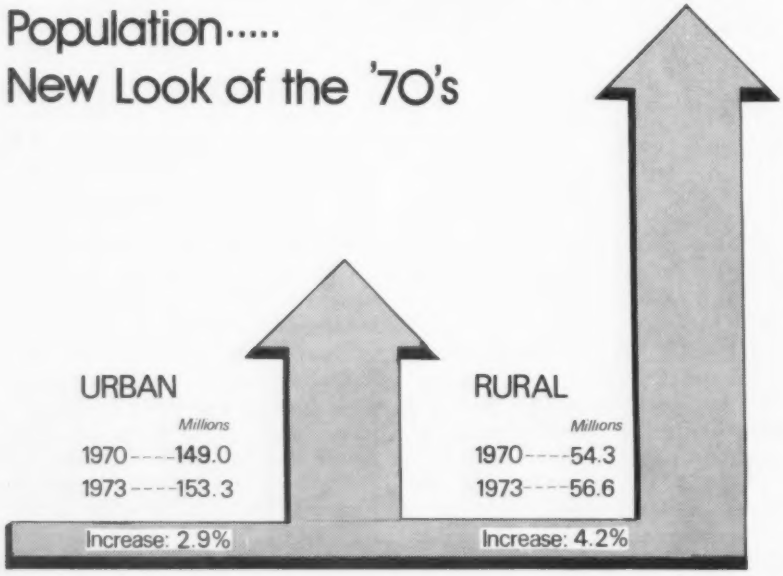
Is it disillusionment with the often unkept promises of urban living? Or is it the lure of the country, where life is simpler, quieter, and where a piece of land can still be found at a price most people can afford? Perhaps both.

Steady migration. Since the early 1970's there has been a steady migration to rural areas. So great, in fact, that some States, like Oregon and Maine, are pulling in their welcome mats, fearing that a population explosion would upset their way of life and spoil the natural beauty of their areas. The phenomenon has been felt almost everywhere—from the Ozarks to the Great Lakes to Appalachia.

To find out more about the drift to the country, an ERS demographer studied population growth from April 1970 to July 1973, the latest month for which the Census Bureau has published statistics on nationwide population trends. During this period nonmetropolitan counties grew 4.2 percent, compared with 2.9 percent for metropolitan counties (one with a city of 50,000 people or more, including suburbs).

Growing faster than cities. This is the first time this century that rural areas have shown a more rapid growth than cities. During the 1960's, metro areas grew twice as fast as nonmetro areas.

For the 3 years of the study, rural counties grew by an average 353,000 migrants a year. In the last decade they lost an average 300,000 a year.



The flight of people from inner cities to nearby countrysides does not fully explain the recent growth of nonmetro areas. As might be expected, counties bordering big cities added most to their populations. But more distant rural areas still managed to grow faster than cities. Apparently, urban sprawl was not enough to slow the trek to small towns and farms.

Older people seeking retirement in tranquil settings and students attending State universities have helped boost population in rural areas.

Fastest growing. Retirement communities have mushroomed in the more scenic parts of the country, and they are by far the most rapidly growing nonmetropolitan areas.

Next are those with a State university or college. Not only do the students swell the size of local populations, but the schools make the towns more attractive for other development.

Rural counties primarily involved in agriculture or with predominantly black populations have been vulnerable to population loss. However, from 1970–73, fewer people moved away than in previous years.

One exception. The only nonmetropolitan areas that didn't retain more of their populations during the study period were counties with major military installations. They lost population, in contrast to high yearly gains during the 1960's. This is not surprising, considering that the U.S. is now reducing its armed forces.

Why have the 1970's seen so much rural growth? For one thing, new jobs in manufacturing, trade, and services were created to provide work for people displaced from agricul-

tural occupations during the postwar period. This meant that by the beginning of the 1970's more counties depended on industry for jobs.

Also, the shortcomings of city living became more noticeable after the racial disorders of the 1960's focused attention on the problems of the poor and on increasing urban pollution, crime, and congestion. More and more people began seeking a safer, quieter, and cleaner place to live.

Energy question. No one knows how long the drawing power of rural areas will last. A lot could depend on what happens on the energy scene. Higher gasoline prices pose a greater threat to the country than to cities, since people living in the country have to drive farther to work and services and usually don't have public transportation.

However, with the continued urbanization of rural life and the increased development of new industry and retirement communities, the magnetism of the countryside could well endure.

[Based on special material by Calvin L. Beale, Economic Development Division.]

New Kid at the Market: Baby Beef Arrives

If labels on beef in the supermarket confuse you, get ready for another one—"baby beef." But, if you're cost conscious, you'll look more closely.

Not to be confused with veal, baby beef—despite the name—is a bit older, usually 7 to 9 months old. Also, baby beef has a coarser texture and a distinct flavor, coming from calves fed on grass in addition to milk.

Still, baby beef costs less than veal and less than heavier, more finished beef. A 3-month review of ads showed baby beef buyers saved up to 60 cents a pound for higher priced cuts. Savings for lower priced cuts were less but still substantial—up to 20 cents a pound for chuck blade roast, for example.

[Based on "Baby Beef Reappears," by Christine J. Hager, National Economic Analysis Division, in *The National Food Situation*, NFS–151, February 1975.]

Coffee Market Needs Perking Up

Coffee, tea, or soft drink?

Over the past 28 years, more and more Americans, whether airborne or earthbound, have been saying "no" to the coffee, and "yes" to the rest.

A recent ERS study shows that coffee consumption in the U.S. dripped steadily downward during 1947–74, whereas consumption of tea and soft drinks bubbled up.

In 1947, U.S. coffee drinkers were averaging a little over 18 pounds on a green bean basis. By 1974, per capita consumption was down to less than 13 pounds. This, despite substantial increases in the number of cups poured, and in the amount of instant coffee made per pound of green coffee beans.

Meanwhile, per capita consumption of tea, on a dry leaf basis, steepened from a bit over half a pound to four-fifths. Soft drinks spurted from 151 8-oz. containers per person in 1947, to 444 containers in 1974.

ERS researchers suspect that the rising tide of tea and soft drink consumption has had a lot to do with the ebb of coffee drinking, but they say that's not the only reason.

According to one ERS economist, "Many in the coffee industry believe a major reason—if not the major reason—for the long-term downtrend in coffee consumption was the change in flavor over the years."

U.S. consumers apparently have detected a change in the flavor of regular coffee since about 1962, when increasing amounts of distinctively flavored robusta beans were first added to the more mildly flavored arabica beans in regular coffee blends. Robusta beans had previously been used only in instant coffee.

The theory is borne out by statistics. The ERS analyst found that the increases in the amount of robusta used in regular coffee blends paralleled the rate of decline in coffee consumption since 1962.

But other factors contributed to the upswing in tea and soft drink consumption.

Young people are downing more soft drinks than ever before. These young people may be sticking longer with the soft drinks as they grow older, and are slower in becoming coffee drinkers in their teens and early adulthood than their parents apparently were.

Another important factor in the rising popularity of soft drinks has been the growing use of noncaloric sweeteners. And tea drinkers evidently have been won over by the increasing availability of instant tea, flavored iced tea mixes, and the advent of ice-cold six-packs of the brew.

Consumption of both tea and soft drinks has also been helped by advertising and promotion. Tea is being touted as the "change-of-pace" drink, and both tea and soft drinks are getting the "all-American" beverage treatment.

Meanwhile, economists suspect that coffee companies may often be defeating their purpose with advertising that labels competitive brands as having a bitter taste.

The ERS researchers found that changes in beverage prices had not greatly swayed the recent trends in coffee, tea, or soft drink consumption. Rising incomes, however, did help explain increases for tea and soft drinks.

The coffee industry may find some reason for encouragement, however, in 1974 figures, which suggest some degree of stabilization in coffee consumption. It even increased slightly last year in the 20–25 age group, and for the 50–59 and 60–69 brackets.

How to perk up coffee consumption in the U.S.? The industry might split the flavors of their coffee, from one regular blend to two—one mild and the other robust. Also, rather than knocking each other's product, coffee producers might get together and sell coffee per se—"remember coffee as it used to be."

[Based on article by Frederick D. Gray, National Economic Analysis Division, "Coffee, Tea, and Soft Drink Consumption Trends," appearing in *Tea and Coffee Trade Journal*, February 1975.]

Recent Publications

Structural Characteristics of Flue-Cured Tobacco Farms and Prospects for Mechanization. Verner N. Grise, Owen K. Shugars, William D. Givan, and Frederic L. Hoff, Commodity Economics Division. AER-277.

If harvest mechanization rates predicted in this study are correct, labor used to harvest flue-cured tobacco in four Southeastern States could decline up to one-half between 1972 and 1978. The four States—Georgia, North Carolina, South Carolina, and Virginia—grow three-fourths of U.S. flue-cured tobacco. About 72 million hours of labor were used to harvest the tobacco in 1972. Only 36-43 million hours will be needed by 1978. From 23 to 36 percent of the acreage will be harvested mechanically; 65 to 80 percent will be cured in bulk barns.

Custom Farm Services in the United States: Status and Potential. G. D. Irwin and J. B. Penn, National Economic Analysis Division. ERS–583.

Using the 1969 Census of Agriculture and other secondary sources, this study surveys custom farm services. Although a minor feature now, these services could increase as a result of changing farm sizes, economies of scale in machine manufacture, and increasing machinery investment costs. In 1969, about 11 percent of all farms provided a little over one-half of the custom services, with the rest being provided by nonfarm operators. Such services were used most in the North-Central and South, mainly on cash grain and livestock farms.

Estimating Crop Losses Due to Hail. Larry M. Boone, Natural Resource Economics Division. AER–267.

Crops lost by hail damage account for about 2 percent of the Nation's annual crop value, according to this study carried out in conjunction with the National Science Foundation. Valued at 1973 prices, the damage amounts to $685 million yearly, over four-fifths of which is in wheat, corn, soybeans, cotton, tobacco, and grain sorghum.

Single copies of the publications listed here are available free from The Farm Index, Economic Research Service, Rm. 1664–So., U.S. Department of Agriculture, Washington, D.C. 20250. However, publications indicated by (*) may be obtained only by writing to the experiment station or university. For addresses, see July and December issues of The Farm Index.

Packing California Mature Green Tomatoes: Costs and Efficiencies. Edward V. Jesse, Commodity Economics Division. AER-282.

By using a model California packinghouse for mature green tomatoes, this study shows packing costs vary by the technique used. Assuming a constant 400-hour packing season and plant operating at 70 percent of maximum capacity, costs may range from $3.56 to $3.82 per hundredweight of packable fruit. Lowest costs were achieved by using dry bin dumping, belt sizing for all fruit, automatic volume filling of No. 1 greens, and manual volume filling for vine-ripes. Highest costs were associated with a combination of trailer dumping, weight sizing, manual filling of No. 1 greens, and place packing of vine-ripes.

Farming and Agribusiness Activities of Large Multiunit Firms. Donn A. Reimund, National Economic Analysis Division. ERS–591.

Farming and related agribusiness activities of 410 large multiestablishment firms are examined in this report. The firms, with annual sales of $1 million or more, were identified from data obtained from the Dun and Bradstreet Complex Business File and classified on the basis of their primary business activities—nonagricultural, farming, and three types of agribusiness (agricultural input, processing, and distribution). The most common farming enterprise was beef cattle production, followed by production of vegetables, fruits, and poultry other than broilers.

The Food and Fiber System—How It Works. Economic Research Service. Agr. Inform. Bull. 383.

This publication surveys the food and fiber system, a network which produced goods worth $243.6 billion in 1973. These goods flow through the producing sectors of the system—input, farm, and product market—to the fourth sector, consumers, who by their purchases, create the demand to continue the flow. Though the publication focuses on the current structure and performance of the food and fiber system, it also identifies some steps that would lead to improved future performance. The current energy situation, in particular, has led to the search for increased efficiency.

Income and Expenses of Interstate Custom Combiners. William F. Lagrone and Charles C. Micheel, Commodity Economics Division. Unnumbered Pub.

A sequel to ERS-563, this report analyzes the 1972 income and expenditures of 34 interstate custom combine operators in the Great Plains. Charges varied considerably, depending on numbers of combines in the crew, the crop harvested, and the types of services performed. Six-combine crews (the maximum considered in this study) earned the greatest gross income per combine; one-combine crews, the least.

Costs of Foods Purchased by USDA and Local School Systems, 1973/74. Economic Research Service. ERS-592.

Using data from telephone interviews with school personnel, this study compares prices paid for 15 foods by USDA and different-size school systems in 1973/74. The average price paid per pound for all foods was substantially lower for school systems with 25,000 or more students than for those with fewer than 2,500 students. Products with greatest cost differences were turkey, chicken, ground beef, and frankfurters. Prices paid per pound averaged over 7 percent higher for all schools than for USDA.

Economic Trends

Item	Unit or Base Period	1967	1974 Year	1974 Jan.	1974 Nov.	1974 Dec.	1975 Jan.
Prices:							
Prices received by farmers	1967=100	—	183	198	182	177	174
Crops	1967=100	—	212	208	224	212	204
Livestock and products	1967=100	—	163	193	153	153	153
Prices paid, interest, taxes and wage rates	1967=100	—	169	158	179	180	180
Family living items	1967=100	—	161	149	171	173	173
Production items	1967=100	—	172	161	183	184	182
Ratio [1]	1967=100	—	109	125	102	98	97
Wholesale prices, all commodities	1967=100	—	160.1	146.6	171.9	171.5	171.8
Industrial commodities	1967=100	—	153.8	135.3	165.8	166.1	167.5
Farm products	1967=100	—	187.7	202.6	187.8	183.7	179.7
Processed foods and feeds	1967=100	—	170.9	162.1	189.7	188.2	186.4
Consumer price index, all items	1967=100	—	147.7	139.7	154.3	155.4	156.1
Food	1967=100	—	161.7	153.7	167.8	169.7	170.9
Farm Food Market Basket: [2]							
Retail cost	1967=100	—	161.9	155.5	166.4	167.8	168.7
Farm value	1967=100	—	177.6	185.7	182.3	177.3	172.9
Farm-retail spread	1967=100	—	152.0	136.4	156.3	161.8	166.0
Farmers' share of retail cost	Percent	—	43	46	42	41	40
Farm Income: [3]							
Volume of farm marketings	1967=100	—	115	129	152	129	126
Cash receipts from farm marketings	Million dollars	42,817	75,004	9,501	10,661	8,554	8,300
Crops	Million dollars	18,434	52,648	5,211	7,261	5,365	4,800
Livestock and products	Million dollars	24,383	42,327	4,290	3,400	3,189	3,500
Realized gross income [4]	Billion dollars	49.9	97.0	—	—	102.5	—
Farm production expenses [4]	Billion dollars	38.3	64.7	—	—	76.1	—
Realized net income [4]	Billion dollars	11.6	32.2	—	—	26.4	—
Agricultural Trade:							
Agricultural exports	Million dollars	—	17,680	1,834	2,353	2,120	2,459
Agricultural imports	Million dollars	—	21,994	787	837	966	811
Land Values:							
Average value per acre	Dollars	[6] 168	[7] 310	—	—	—	[8] 339
Total value of farm real estate	Billion dollars	[6] 181.9	[7] 324.2	—	—	—	[8] 355.0
Gross National Product: [4]	Billion dollars	793.9	1,397.4	—	—	1,430.9	—
Consumption	Billion dollars	492.1	876.7	—	—	895.8	—
Investment	Billion dollars	116.6	209.4	—	—	209.4	—
Government expenditures	Billion dollars	180.1	309.2	—	—	323.8	—
Net exports	Billion dollars	5.2	2.1	—	—	1.9	—
Income and Spending: [5]							
Personal income, annual rate	Billion dollars	629.3	1,150.5	1,107.0	1,184.5	1,191.0	1,191.1
Total retail sales, monthly rate	Million dollars	26,151	44,815	42,932	44,469	44,821	45,894
Retail sales of food group, monthly rate	Million dollars	5,759	9,980	9,551	10,455	10,330	10,635
Employment and Wages: [9]							
Total civilian employment	Millions	74.4	[9] 85.9	[9] 85.8	[9] 85.7	[9] 85.2	[9] 84.6
Agricultural	Millions	3.8	[9] 3.5	[9] 3.7	[9] 3.4	[9] 3.3	[9] 3.4
Rate of unemployment	Percent	3.8	5.6	5.2	6.6	7.2	8.2
Workweek in manufacturing	Hours	40.6	40.0	40.4	39.5	39.4	39.2
Hourly earnings in manufacturing, unadjusted	Dollars	2.83	4.40	4.22	4.58	4.65	4.65
Industrial Production: [5]	1967=100	—	125	125	122	118	114
Manufacturers' Shipments and Inventories: [5]							
Total shipments, monthly rate	Million dollars	46,449	81,723	76,389	86,152	79,487	79,124
Total inventories, book value end of month	Million dollars	84,655	150,404	122,570	147,135	150,404	151,624
Total new orders, monthly rate	Million dollars	46,763	83,297	78,139	84,282	76,454	74,958

[1] Ratio of index of prices received by farmers to index of prices paid, interest, taxes, and farm wage rates. [2] Average annual quantities of farm food products purchased by urban wage earner and clerical worker households (including those of single workers living alone) in 1959–61—estimated monthly. [3] Annual and quarterly data are on 50-State basis. [4] Annual rates seasonally adjusted fourth quarter. [5] Seasonally adjusted. [6] As of March 1, 1967. [7] As of March 1, 1974. [8] As of Nov. 1, 1974. [9] Beginning January 1972 data not strictly comparable with prior data because of adjustment to 1970 Census data.

Sources: U.S. Dept. of Agriculture (Farm Income Situation, Marketing and Transportation Situation, Agricultural Prices, Foreign Agricultural Trade and Farm Real Estate Market Developments); U.S. Dept. of Commerce (Current Industrial Reports, Business News Reports, Monthly Retail Trade Report and Survey of Current Business); and U.S. Dept. of Labor (The Labor Force and Wholesale Price Index).

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